

Patent Abstracts of Japan

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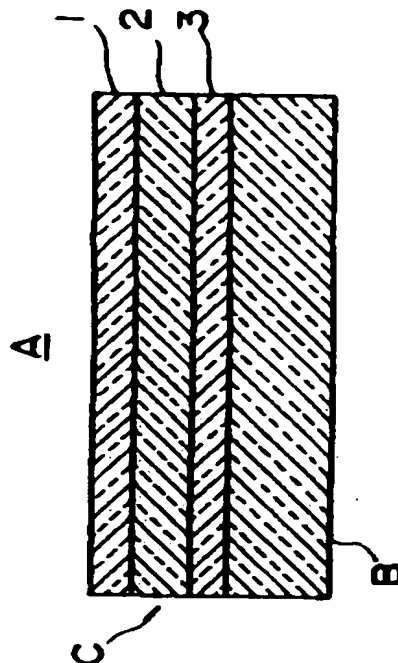
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APPLICANT : NIPPON SHEET GLASS CO LTD;

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TITLE : TRANSPARENT LOW REFLECTER



ABSTRACT : PURPOSE: To make a lowering of a reflectance in a region of center wavelength by increasing from a substrate side to an air side, the reflectance of the antireflection coating lying in the second layer among the three layers of the antireflection coating counting from the air side to the substrate side of the tilted reflector.

CONSTITUTION: MgF_2 having the reflectance n_1 of 1.30~1.45 ranges is used as the material forming the first layer 1 having the low reflectance, the mixture of ZrO_2 and TiO_2 having the reflectance n_2 of 1.95~2.15 ranges is used as the material forming the second layer 2 having the high reflectance. The mixture of Al_2O_3 and CeF_3 having the reflectance n_3 of 1.60~1.80 ranges is used as the material forming the third layer 3 having the middle reflectance. The thicknesses n_1d_1 ~ n_3d_3 of optical coatings in from the first layer to the third layer are $n_1d_1=\lambda_0/4$, $n_2d_2=\lambda_0/2$, and $n_3d_3=\lambda_0/4$ respectively. The reflectance of the transparent substrate B is 1.49~1.57. The coating C having ≥ 0.02 the difference of the reflectances between the air side A and the substrate side of the tilted reflector is used as the second coating whereby the reflectance λ_0 of the tilted reflector in the region of the center wavelength depresses.

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